

Breath of Fresh Air

Issue 44

Information, news and advice for improving asthma well-being

Spring 2012

Partners Asthma Center Patient Registry

Partners Asthma Center includes more than 40 practicing allergists and pulmonologists providing specialist care for asthma and related diseases. We are committed to providing the finest and most up-to-date care to our patients. As you might imagine, we ask ourselves often, how are we doing? How are *you* doing?



Clinical and Research Registry

With the launch this year of our Patient Registry, we hope to find out. We have developed a questionnaire that asks about you and your asthma, your asthma symptoms,

your medications, your past experiences with asthma, and your readiness to deal with an asthma attack. We want to know for our entire group of patients as a whole about how well your asthma is controlled so that we can do a better job achieving good asthma control for each of our patients. With this Patient Registry, we are seeking your feedback about how you are doing so we can gauge how well we as healthcare providers are doing our job.

Because we believe in the scientific method, we will test to see how best to get your feedback. We plan a “pilot phase” in which only some patients will receive the questionnaire in the mail. We will be testing the best way to get your response. However, everyone can participate now via the internet. Simply go to our website (www.asthma.partners.org) and click on Patient Registry. You can complete and submit the entire questionnaire online.

We would also like to make the questionnaires available to you as you wait in the medical office to see your Partners Asthma Center physician. We are in the process of acquiring iPads for our waiting rooms, so that you can complete the electronic version of the questionnaire while you (briefly) wait. In the end, some may prefer to participate in the Patient Registry with pen and paper; others may choose the click of the keyboard or tap of the iPad touchscreen. We welcome your participation in any format.

It is important that you know the following about our asthma questionnaire:

- Any information that you share will remain entirely confidential. It will be impossible for any doctors (or others) outside of Partners Asthma Center to obtain this information about you.
- To ensure protection of your rights to privacy regarding your medical information, we have had this Patient Registry reviewed and approved by our hospital’s Institutional Review Board.
- If you decline to complete the questionnaire and participate in our Patient Registry, your decision will have absolutely no effect on the medical care that you receive at Partners Asthma Center.
- At the end of the questionnaire, you will be asked about your interest in learning about asthma research as it relates to this Patient Registry. The same “rules” apply: No pressure; no obligation; only an opportunity if you wish to explore how you can easily get involved in advancing asthma knowledge through research.

Anticholinergic Bronchodilator Therapy for Asthma?

“Beta-agonist bronchodilators for asthma; anticholinergic bronchodilators for chronic obstructive pulmonary disease (COPD).”

That has been the dogma since the mid-1980s when the anticholinergic bronchodilator, ipratropium (Atrovent), was made available by metered-dose inhaler and nebulizer for the treatment of obstructive lung diseases.

The Food and Drug Administration has approved ipratropium (and its long-lasting relative, tiotropium [Spiriva]) for the treatment of COPD, not asthma. And the Expert Panel of the National Asthma Education and Prevention Program has recommended ipratropium in asthma only for acute management of severe asthmatic attacks as part of initial emergency department treatment.

Now comes a new study (published in the *New England Journal of Medicine* in October, 2010) comparing once-daily tiotropium (Spiriva) with the twice-daily, long-acting beta-agonist bronchodilator, salmeterol (Serevent) as add-on therapy for asthma patients taking low-dose inhaled steroids. Specifically, the research study asked the following question: among patients still symptomatic despite taking the inhaled steroid, beclomethasone (Qvar 40) 2 puffs twice daily, which is a better strategy:

- doubling the dose of inhaled steroids to beclomethasone (Qvar 80) 2 puffs twice daily;
- continuing the lower dose of inhaled steroids and adding salmeterol (Serevent);
- or continuing the lower dose of inhaled steroids and adding tiotropium (Spiriva)?

And the answer ...

Doubling the dose of the inhaled steroid was *least* effective. Adding a long-lasting bronchodilator to the low dose of inhaled steroid was a better strategy, and tiotropium (Spiriva) was *equally effective* compared to salmeterol (Serevent). It was equally effective in improving morning peak flow, evening peak flow, proportion of days with well-controlled asthma, and daily symptom scores.

New options for treating asthma

As a quick-reliever for asthma, the short-acting ipratropium (Atrovent) is slower in onset and less potent as a bronchodilator than the short-acting beta-agonist, albuterol (ProAir, Proventil, Ventolin). But as maintenance therapy, the long-acting tiotropium (Spiriva) appears on average just as good as the long-acting beta-agonist, salmeterol (Serevent). This is indeed “big news.” In part it is “big news” because it gives patients and their medical providers an alternative treatment for asthma that is not well-controlled on low-dose inhaled steroids alone. And it is “big news” because of the controversy surrounding the potential risks of the long-acting beta-agonist bronchodilators in asthma. It is a complete unknown as to whether a long-acting anticholinergic bronchodilator carries any of those same risks for severe asthmatic attacks as have been reported for the long-acting beta-agonist bronchodilators, salmeterol (Serevent) and formoterol (Foradil), although the opinion of most experts is that it does not.

It is a safe bet that there will be more studies—involving more patients and of longer duration—addressing the efficacy and safety of long-acting anticholinergic bronchodilators in asthma *among patients already taking an inhaled corticosteroid*. The italics is meant to emphasize the point that no one would recommend tiotropium (Spiriva) in asthma in the absence of anti-inflammatory steroids. Inhaled steroids remain first-line therapy for the treatment of asthma. In this way, asthma and COPD remain therapeutically distinct.

Breath of Fresh Air

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Vitamin D and Asthma: Exploring the Link

That vitamin D is important to maintaining one's health is not news. It has been known for more than a century that vitamin D promotes absorption of calcium through our intestines from food sources in our diet and also increases deposition of calcium in our bones. We can get vitamin D from our foods, from vitamin supplements, and from sunshine on our skin (where the human body can make vitamin D). A severe lack of vitamin D in childhood leads to thin and deformed bones (rickets). Vitamin D deficiency in adulthood can contribute to weakened bones (osteomalacia) and indirectly to premature loss of bone mass (osteoporosis).

It turns out that vitamin D has many other effects in the human body that, until recently, had gone unrecognized. In particular, scientists have been investigating ways in which vitamin D affects our immune system, which of course brings us to asthma. Intriguing research, still preliminary, has discovered mechanisms by which vitamin D may direct our immune system away from making allergic reactions; and other pathways that may help us fight viral respiratory tract infections. Still other studies suggest that our response to certain asthma medications may be influenced by our vitamin D levels.

Consider the following experiments conducted by asthma researchers associated with Partners Asthma Center.

The amount of vitamin D intake in their diets was recorded in a large number of pregnant women. It was found that the

lower their reported vitamin D intake, the higher the risk that their children went on to develop asthma.

In another study of young children with asthma living in multiple U.S. cities, their risk of asthma exacerbations increased if the level of vitamin D measured in their blood was low, compared to children with normal blood levels. The same results were found among children living in Cost Rica as were found in the U.S. study.

Other researchers reported that children with the lowest levels of vitamin D suffered on average more viral respiratory tract infections per year than children with the highest measured blood levels.

As we have often noted in previous *Breath of Fresh Air* articles, an association between two phenomena does not prove that one has caused the other. Remember the observation that persons involved in car accidents who were carried to the ambulances that took them to the hospital were more likely to die than those who were able to walk to the ambulance. This association does not prove that use of stretchers is a cause of death from car accidents! It does, however, identify a difference between two groups that deserves further exploration and explanation. So, too, vitamin D deficiency and asthma. Evidence linking the two is strong — now comes the search for an explanation for this association.



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News about Asthma

Primatene Mist

For more than 40 years, asthmatic sufferers could obtain a quick-acting bronchodilator over-the-counter, without a prescription. This inhaler, Primatene Mist, delivered the medication, epinephrine. It is said that 2–3 million persons relied on Primatene Mist as their asthma medication. That option came to an end in December, 2011, when sale of Primatene Mist stopped ... for the sake of the environment. Primatene Mist used chlorofluorocarbons (CFCs) as the propellants to create its medication spray.

As you probably already know, CFCs released into the atmosphere disrupt the ozone layer high above the earth's surface, an important buffer protecting us and other animal life from excessive bombardment by the sun's ultraviolet rays. Since 1987 governments worldwide have been cooperating to ban the production and use of CFCs. CFCs have disappeared from almost all of our asthma medications (the exception, for now, is the quick-acting bronchodilator via breath-actuated inhaler, Maxair).

Most persons with asthma use the quick-acting bronchodilator, albuterol (ProAir, Proventil, or Ventolin). Some prefer levalbuterol (Xopenex) or pirbuterol (Maxair). With the exception of Maxair, these inhalers utilize the ozone-friendly propellant, hydrofluoroalkane (HFA), thought safe for the environment. The best option for persons who relied on Primatene Mist is to contact a physician and obtain a prescription for one of these inhalers. In many ways, the prescription inhaler may be preferable: stronger, longer-lasting in its effects, and safer, and accompanied by the advice and guid-



ance of a medical professional, who can help evaluate what other medications are potentially needed to control asthma.

Primatene is still available over-the-counter in tablet form. Like the other over-the-counter formulation, Bronkaid tablets, Primatene tablets contain a small amount of the bronchodilator, ephedrine, in combination with the mucus-thinner, guaifenesin. It is of limited benefit in asthma; we would not recommend its use.

Montelukast (Singulair)

Montelukast (Singulair) is the most widely prescribed leukotriene blocker in the United States. It is used to treat both asthma and allergic rhinitis and is approved for both very young children

and for adults. It has been a mainstay of asthma and allergy treatment since first approved by the Food and Drug Administration (FDA) in 1998... and it is costly! On average, a one-month supply costs approximately \$150 or as much as \$5 per tablet.

Financial relief may be on the way. The US patent for Singulair expires in August of this year, and it is very possible that a generic version of montelukast will be made available soon thereafter. In general, manufacturers of generic medications are able to sell their medications at a lower cost than the original brand-name version. The FDA is charged with ensuring that the generic medications are equally effective and safe as their brand-name predecessors. This past year has seen approval of generic atorvastatin (Lipitor), the cholesterol lowering medication, and of levofloxacin (Levaquin), a powerful antibiotic. Now, a low-cost generic montelukast may be on its way.

Partners Asthma Center Launches an Asthma Blog

As Partners Asthma Center approaches its 23rd year (having come to you as the Longwood Medical Area Adult Asthma Center in 1989), it is high time that we enter the modern era of social networking and electronic media. Part of our mission has always been to share reliable and up-to-date information about asthma and related diseases with our patients. Via our website — www.asthma.partners.org — we have also made this information available to anyone who wishes to join us online. Now we propose to take the next step, as we launch our Partners Asthma Center’s Asthma Blog and Facebook page.

Where exactly are we hoping to go as we enter the “blogosphere?” We have three goals in mind.

The first is rapid dissemination of accurate and helpful information, posting new pieces about asthma every week or two.

The second is the opportunity for interactive discussion about asthma. With a few keystrokes on your computer keyboard, you can let us know what you think about our blog posting or anything else about asthma that you have on your mind. You can share your thoughts with a huge electronically-connected community of people who live with a similar medical condition.

And third, we can achieve these first two goals at no cost for printing, mailing, or mailing list management. Quicker, more interactive, open to all, and free, that is the promise of the information highway. To it we hope to bring a reliable source of useful information and trustworthy medical opinion.

So join us as we venture boldly forward: visit www.pacasthma.blogspot.com and www.facebook.com/partnersasthmacenter.

“Beam us up, Scottie!”



New Doctors at Partners Asthma Center

Partners Asthma Center is pleased to have Drs. Paige Wickner and Karen Hsu Blatman join us as allergists practicing at Brigham and Women’s Hospital (850 Boylston Street).



Dr. Wickner graduated Dartmouth Medical School and did her residency and specialty training in Allergy and Immunology at Yale Medical Center. She brings to her practice both expertise in asthma care and a general interest in allergic diseases.



Dr. Hsu Blatman received her medical degree from the University of Iowa Medical School and did her residency training in Internal Medicine at the University of Virginia Health System. She trained in Allergy and Immunology at Northwestern University in Chicago. Her special interests in allergy include eosinophilic esophagitis and food allergies, which augment her expertise in asthma.

Sharing Your Asthma Stories

You — our readers and patients — have the wisdom of experience, and we would like to share it through our asthma newsletter, *Breath of Fresh Air*. Help us make this a place where other patients and families dealing with asthma can benefit from your experiences, your stories of asthma, and the tips and strategies for coping that you have developed. Make it possible for others to learn from what you have already been through!

We would like to publish your story in the next issue (with your name included or anonymously, as you wish). It can be an anecdote, a piece of asthma history, your advice to others, or difficulties that you have had dealing with asthma.

Send us your asthma story — a paragraph or two will suffice. You can send it:

- by mail (Partners Asthma Center, PBB Clinics-3, 15 Francis Street, Boston, MA, 02115),
- by e-mail (asthma@partners.org), or
- by fax (617-732-7421, attention: Editor, Breath of Fresh Air).

If we print your asthma story, we will send you as thank you a Partners Asthma Center tote bag and mug.

Breath of Fresh Air

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